

Amendments to the Claims

Claim 17 is currently amended. Claims 1 – 16 and 18 are original. Claims 19 and 20 are new. No new matter is added by these amendments. Consideration of all amendments is respectfully requested.

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Listing of Claims

Claim 1 (original): An apparatus for improving the management of received data packets of a host system that comprises a plurality of data buffers and a plurality of descriptors that corresponds to a subset of the plurality of data buffers to manage the received data packets, the apparatus comprising:

10 a receiver for receiving a data packet;
a first storage unit for storing the data packet from the receiver;
a counter for monitoring the number of descriptors in a first state to produce a count value;

15 a second storage unit for storing a threshold value; and
a comparator for comparing the count value with the threshold value and producing a comparison signal;
wherein the apparatus issues a first event to the host system according to the comparison signal.

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Claim 2 (original): The apparatus of claim 1 further comprising a Receive DMA (direct memory address) for transferring the data packet from the first storage unit into the data buffers.

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Claim 3 (original): The apparatus of claim 2 wherein the counter, the second storage unit, and the comparator are positioned within the Receive DMA module.

Claim 4 (original): The apparatus of claim 1 wherein the first event indicates that data

buffers corresponding to the descriptors should be cleared.

Claim 5 (original): The apparatus of claim 1 wherein the first state is an unavailable state.

- 5 Claim 6 (original): The apparatus of claim 1 wherein the threshold value is
programmable.

Claim 7 (original): The apparatus of claim 1 wherein the first state is a free state.

- 10 Claim 8 (original): The apparatus of claim 1 wherein the apparatus issues a second event
when the data packet is an ok packet.

Claim 9 (original): The apparatus of claim 8 wherein the data buffers corresponding to the
descriptors are cleared when the first event or the second event is issued.

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Claim 10 (original): The apparatus of claim 1, wherein the apparatus is a wireless network
device.

- 20 Claim 11 (original): A method for improving the management of received data packets of
a host system that comprises a plurality of data buffers and a plurality of
descriptors that corresponds to a subset of the data buffers to manage the
received data packets, the method comprising:
receiving a data packet;
transferring the data packet into at least one of the data buffers;
25 monitoring an amount of the descriptors in a first state;
comparing the amount with a threshold value to generate a comparison signal;
and
generating a first event to the host system according to the comparison signal to

prevent all the descriptors from being in the first state.

Claim 12 (original): The method of claim 11 wherein the first state is an unavailable state.

5 Claim 13 (original): The method of claim 11 wherein the threshold value is
programmable.

Claim 14 (original): The method of claim 11 wherein the first state is a free state.

10 Claim 15 (original): The method of claim 11 further comprising:
generating a second event when the data packet is an ok packet.

Claim 16 (original): The method of claim 15 wherein the data buffers corresponding to
the descriptors are cleared when the first event or the second event is generated.

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Claim 17 (currently amended): The method of claim 11 wherein ~~the method further~~
~~comprises issuing a third event when transferring an error packet~~ the amount of
the descriptors in the first state is monitored when a plurality of error data
packets are continuously received.

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Claim 18 (original): A method for improving the management of data packets received
from a network by a host system that comprises a plurality of data buffers and
that utilizes a plurality of descriptors that corresponds to a subset of the
25 plurality of data buffers to manage the data packets received from the network,
the method comprising:
receiving a data packet from the network;
transferring the data packet into at least one of the data buffers;

monitoring the number of descriptors that will have their state changed when
the data packet is transferred;
calculating a count value according to the number of descriptors that will have
had their state changed by the data packet being transferred; and
5 comparing the count value with a threshold value, and triggering a first event to
the host system when the count value reaches the threshold value;
wherein the first event notifies the host system to clear the data buffers
corresponding to the descriptors.

10 Claim 19 (new): The apparatus of claim 1 further comprising:
a masking circuit, for blocking an error signal which indicates the data packet is
an error data packet until the count value reaches the threshold value.

15 Claim 20 (new): The apparatus of claim 1 wherein the counter monitors the number of the
descriptors in the first state to produce the count value when the apparatus
continuously receives a plurality of error data packets; wherein the counter is
reset when the data packet is an ok data packet.

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